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refractive index of the surroundings (since there is no illustrated refraction of the beam entering or exiting the first layer 221.) In practical terms, a fluidic device and system for providing variable polarization utility may resemble the device 220 depicted in **FIGS. 8A-~~7B~~8B**. Multiple fluids may be supplied to the device and mixed upstream of a substantially optically transmissive window region. If the first and second fluids have different indices of refraction, then the proportions of the two fluids within the device may be varied over time using supply valves to selectively control the degree of polarization of the reflected light, up to a maximum when Brewster's equation (as stated in **FIG. 9B**) is true for the particular fluid or fluid mixture (n_2). Alternatively (as further described in connection with other embodiments herein), substantially immiscible fluids may be provided in a channel to form one or more discrete fluidic plugs, and those plugs may be moved by various actuation means in or out of the window, thus varying the index of refraction over time to either satisfy or not satisfy Brewster's equation. Thus, a fluidic optical device capable of providing variable polarization utility is provided.

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[0077] In further embodiments of the invention, devices for performing optical switching are provided. For example, **FIGS. 10A-10B** diagrammatically illustrate a fluidic optical device 230 according to one embodiment that may be used to selectively manipulate an incident beam 239. The device 230 may be either microfluidic or have channels and chambers of conventional macrofluidic scale. Although the device 230 is illustrated as having six layers 231-236, one or more layers could be combined or integrated. The first layer 231 is preferably fabricated from a substantially rigid material that is substantially optically transmissive of a desired light spectrum. For example, if the desired light spectrum to be used with the device 230 includes the infrared spectrum, then the first layer 231 may be fabricated from quartz. Alternatively, the first layer 231 may be formed from multiple materials, so long as a central region or window above the fluid chamber 240 remains substantially optically transmissive of the desired light spectrum. The second and third layers 232, 233 defined the lateral boundaries of the fluid chamber 240, with their combined thickness defining the approximate thickness of the chamber 240. The second and third layers 232, 233 are preferably formed from rigid materials, but since these layers 232, 233 preferably do not interact with the incident light, the optical properties of such materials is less significant. The fourth layer 234, which defines the lower boundary of the chamber 240, is preferably formed from a flexible material that is substantially reflective of the incident beam 239. In a preferred embodiment, the fourth layer 234 is composed of a metallic film or foil bonded to a flexible membrane such as latex, although other materials or combinations thereof may be used. Preferably, the reflective material is spray deposited on the